

Increasing Comprehensible Input for English Language Learners with Direct
Vocabulary Instruction

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FACULTY APPROVAL

Increasing Comprehensible Input for English Language Learners with Direct
Vocabulary Instruction

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ABSTRACT

The purpose of this project was to develop a small group intervention for fifth grade English language learners whose first language was Spanish. The procedure included a pretest in the fall of 2009 using the Gates MacGinitie, fourth edition, a vocabulary and reading comprehension intervention, and a posttest using the Gates MacGinitie, fourth edition in the Spring of 2010. The intervention was performed for eighteen weeks running January 2010 until May 2010. The intervention program used the Washington state standards and a social studies content based curriculum for instruction. The instruction of vocabulary was to determine if student skills in derivational morphology increased scores of the Gates MacGinitie, fourth edition assessment. The study showed a significant increase of scores on the posttest as compared to the pretest.

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CHAPTER 1

Introduction

Background for the Project

One of the major concerns for classroom teachers was the significant difference of word recognition among their English language learners (ELL). While native English speaking children start Kindergarten with a knowledge of about five thousand words, children whose first language was other than English enter school with a knowledge of around two thousand words. The disparity is even greater when ELL students were asked to produce academic language about topics that they did not have background knowledge of.

Metalinguistic awareness was the ability to manipulate, analyze language, and to decode words which also led to better reading comprehension (Zipke, Ehri, Cairns, 2009). Metalinguistic awareness of vocabulary was understood to be a depth of vocabulary knowledge rather than breadth. Knowing lots of words did not predict student performance on the district and elementary school assessments. Also knowing that ELL students needed direct vocabulary instruction did not give teachers a clear enough vision of best practices in selecting which words to teach.

Statement of the Problem

The issue addressed for this study was how to teach vocabulary which led to a metacognitive knowledge for students to learn new words independently.

The problem studied was the outcome of vocabulary instruction which focused on derivational morphological awareness and whether there was an impact on student comprehension of academic text. The classroom teachers requested the researcher to determine a method that would inform their vocabulary instruction and thereby improve reading comprehension for their ELL students.

The classroom instruction on vocabulary and reading comprehension did not provide an adequate increase of scores on the Gates MacGinitie, fourth edition (MacGinitie, W., MacGinitie, R., & Maria, 2002) for ELL students. The Gates MacGinitie (GMRT-4) was an important assessment used by the school district to determine if fifth grade students were academically ready to move onto middle school.

Purpose of the Project

The objective of this project was to determine how effective direct vocabulary instruction was able to provide a greater depth of word knowledge and provide students with strategies to determine meaning of unfamiliar words enabling ELL students to better comprehend academic text on the GMRT-4 assessment. The study was expected to yield important findings for teachers to use in the instruction of vocabulary and reading comprehension.

Delimitations

English as a second language (ESL) interventions were administered through in two locations within the elementary school. Depending on the nature

of the lesson determined whether small group instruction occurring within the general education classroom or a separate ELL classroom. Each fifth grade teacher was provided with a specific time during their instructional day for classroom guided reading instruction. The goal for timing guided reading in the general education classroom and the ELL intervention was to ensure that ELL students did not miss academic content delivered by general education teacher. The ESL intervention for this study was scheduled for thirty minute blocks, five days per week, and delivered from January 2010 through May 2010.

Assumptions

It was assumed that the students would have access to appropriate materials according to their English language proficiency level. The ESL teacher qualifications included knowledge of how to select materials that were culturally relevant which increased the possibility of comprehensible input for each student. The participants in the intervention were equivalent in their scores on the GMRT-4 assessment for vocabulary and text comprehension and well as their language proficiency according to the 2009 Washington State Language Proficiency Test II (WLPTII) assessment. The participants in the treatment were all of Hispanic descent and spoke Spanish as their first language.

Hypothesis

English language learner students who received ESL small group intervention scored higher on GMRT-4 test than English language learner

students who did not receive small group ESL intervention. The scores from the GRMT4 assessments were used to determine fifth grade level word knowledge and comprehension of grade level text according to the developers of the GMRT-4 assessment.

Null Hypothesis

There was no significant difference between the fall and spring GMRT-4 assessments for English language learner students who received small group ESL intervention than for English language learning students who did not receive small group ESL intervention. The significance was determined using threshold levels of $p \geq .05$, $.01$, and $.001$.

Significance of the Project

The significance of the project was deemed important because of the increase in ELL students within the last three years. The elementary school has made annual yearly progress (AYP) according to the Washington State Office of Superintendent of Public Instruction (OSPI) in academics every year. The increase of language learners was a direct impact on AYP if ELL students did not pass the state Measurement of Student Progress assessment. The state of Washington gauged AYP according to cells delineated in part by ethnicity. Research has shown that Hispanic ESL students have a consequential deficit in English academic vocabulary. This deficit did not allow ELL students full access to the content of the Washington state measurement of student progress (MSP)

assessment.

Procedure

The ESL intervention was delivered for thirty minutes, five days a week, from January, 2010 through May, 2010. There were a total number of eighteen weeks that the ESL intervention was performed.

The treatment group participants were selected based on their advanced language proficiency according to the scores on the 2009 WLPTII assessment and on district reading assessments that placed the students one or more grade levels below their peers. The assessments used for fifth grade in the general education classrooms consisted of the Gates McGinitie test and the Fountas & Pinnell Benchmark Assessment System. The English language proficiency of the participants was assessed using the Rigby ELL Assessment Kit administered by the ELL program.

The intervention used Word Generation (Strategic Education Research Partnership, 2008) articles that were selected based on student interest, student reading level and on their English language proficiency. The scope and sequence of the intervention included teacher read aloud, shared reading, and guided reading strategies for each article over a span of about five days. New topics were introduced every third week and lessons included listening, speaking, reading, and writing activities, as well as both content and language objectives. The

vocabulary selected from the Word Generation articles were identified as important in comprehending the text and usefulness for other academic pursuits.

The school district has established thinking skills students needed to master for continued growth in reading proficiency. Appendix A provided the monthly chart of reading skills that was focused on each month at the elementary school. The intervention was performed to include the thinking skill for each month according to the calendar in Appendix A. The skills calendar was also used by the fifth grade classroom teacher as part of their instruction in reading and writing.

Assessments during the small group interventions included both formative and summative progress monitoring. Formative assessments were documented using anecdotal notes of reading behaviors of the students. The anecdotal notes informed instruction by establishing each student and their zone of proximal development (ZPD). In this way, the instructor was able to isolate specific skills that needed additional support through teacher modeling and student practice. Summative assessment consisted of paper and pencil comprehension questions about the text and multiple choice tests on vocabulary meaning identification. The students were also scored on their final paragraph writing and on their participation in the debate at the end of the unit.

Definition of Terms

formative assessment. Formative assessment was defined as observation of student comprehension of academics and used to inform instruction.

Fruyer Model. A graphic organizer which provided a space to write the target word and four quadrants to write a definition, examples of word usage, a picture to represent the word, and synonym of the target word.

guided reading – Guided reading was a strategy used in a small group that was teacher guided with before, during, and after reading tasks to aid in the comprehension of text.

summative assessment. Summative assessment was used to document data showing student growth in reading and vocabulary comprehension.

shared reading. Teacher and students engaged with the text through asking and answering questions. Meaning was co-constructed by the students and the teacher.

zone of proximal development. Lev Vygotsky's learning theory was defined as “ the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers”, (Vygotsky, 1978).

Acronyms

AYP. Annual yearly progress.

ELD. English language development.

ESL. English as a second language.

ELL. English language learner.

GLE. – grade level equivalency.

GRMT-4. Gates MacGinitie, fourth edition.

OSPI. Office of Superintendent of Public Instruction.

WLPT II. Washington Language Proficiency Test II.

ZPD. Zone of proximal development.

CHAPTER 2

Review of Selected Literature

Introduction

All children exposed to communication naturally develop ways to express their needs. As babies, they cry when hungry or distressed and coo when content. As children grow, they begin to say simple words, expand into phrases, then into simple sentences, and progressively increase their ability to produce complex sentence structures to convey deeper meanings. The language they learned first does not change how children learn to communicate.

There are profound differences in the circumstances in which children live and the kind of exposure they have to language interactions. For children who were socially and economically disadvantaged they can enter school knowing half as many words as children from a higher socio-economic status (Graves, 1982, as cited by Beck, 2002). For children of immigrant families whose first language was other than English, they have an even greater disadvantage in most U.S. schools where the English language was the only method of instruction. The student entering U.S. schools were at a greater risk of failing because of their limited English proficiency.

For ELL students it was essential that they were instructed with the most current research based strategies for language acquisition. The purpose of small group instruction was to address the needs of students who were struggling to

meet state standards. The small group intervention provided a second dose of teacher modeling and more opportunities to practice literacy with a smaller teacher to student ratio. The instruction was differentiated for each student at their developmental level so that most of the content was understandable, or to say it another way, comprehensible. Comprehensible input as determined by Stephen Krashen was language delivered to students just above their current ability. The idea for teachers was to present information that was at a student's comprehensible input level plus one (Krashen, 1989).

Assessments taken during small group intervention was to provide guidance for the teacher to determine each student's level of comprehension of text and vocabulary. Formative instruction was a method that provided many ways of gathering knowledge about student understanding and provided the freedom to assess students in a method that best matches how they learn. The theory of multiple intelligences by Dr. Howard Gardner stated that there are nine types of intelligence. The different types of intelligences included: linguistic, bodily-kinesthetic, logical-mathematical, special, interpersonal, intrapersonal, naturalist, existential, and musical (Gardner, 1999). Giving students a choice of how to demonstrate their knowledge allowed them to utilize their strengths and was more motivating than paper and pencil tests. Grades are not assigned but instead formative assessment was meant to provide immediate feedback to the student.

Vocabulary and Reading Comprehension

For the purpose of this project the definition of vocabulary was considered to be knowledge of words and word meanings in both oral and print language and in productive and receptive forms. More specifically, vocabulary referred to words that students must know to read increasingly demanding text with comprehension.

Research has shown that the extent of students' vocabulary knowledge relates strongly to their reading comprehension and overall academic success (Pearson, 2007). To get meaning from what they read, students needed both a great many words in their vocabularies and the ability to use various strategies to establish the meanings of new words when they encountered them. Students who didn't have large vocabularies or effective word-learning strategies often struggled to achieve comprehension. By fifth grade the students had experienced a cycle of frustration and failure that could affect their motivation to learn. Because these students didn't have sufficient word knowledge to understand what they read, they typically avoided reading. Because the ELL students who participated in the study didn't read very much, they didn't adequately expand their vocabularies to keep up with their English only speaking peers.

According to the National Reading Panel report in 2000 there was a direct link between vocabulary knowledge and reading comprehension and also the number of words students could produce orally. For English language learners

the amount of words they could produce orally allowed greater access to printed words. If students had the printed words in their oral vocabulary, they could more easily and quickly sound out, read, and understand them, as well as comprehend what they are reading. If the words were not in student's oral vocabulary, they had trouble reading the words and their comprehension was hindered (National Institute of Child Health and Human Development, 2000). Thus, an elaborate vocabulary was the bridge between decoding words and the cognitive processes of comprehension.

An extensive body of research indicates that language learners experienced an initial silent period, a time when listening to spoken language was the initial comprehension of learning a second language. Even though this was not a new concept in second language acquisition, there was a growing interest in the role listening comprehension has in the pedagogy of teaching ESL (Nagle, & Sanders, 1986). In advanced language learners who had good communication skills in a social context, there was a misconception that they could perform at the level of English only speakers in the comprehension of grade level text. As noted earlier however, if the academic language was not part of oral communication, students struggled to comprehend the meaning of new words.

Stephen Krashen's concept of comprehensible input calls for the teacher to make language understandable through associated inputs (Krashen, 1989). This input can take the form of actions and visual cues or what Nagel and Sanders calls

“input-processing activities. . . rehearsals that foster long-term retention”, (Nagel and Sanders, 1986, p. 15). James J. Asher’s study of learning languages promoted a strategy of Total Physical Response Technique, (Asher, 1969). In Asher’s study, students were given a command and then performed the task physically. Part of his conclusion noted that “during training, it did not matter whether students listened to a command and then acted . . . or listened to the command and watched the performance of the physical command”, (Asher, 1969, p. 17). The five senses provided the input of learning and the brain processed the information cognitively.

The cognitive processes of the brain began with a sensory input through exposure to the environment. Expanding on Robert Stahl’s information processing model, (Stahl, 1985), David Sousa provided a more simplified version to aid in understanding how the brain disseminated information. The environment was taken in through the senses of sight, hearing, touch, smell, and taste. The brain either rejected the information or accepted it to be placed in the intermediate memory. For the information to be stored for later use, the learner must make meaning from the information. The greater the importance to self, the more likely the information was stored into long term memory. Past experiences and self-concept had the largest impact on whether new learnings were stored for later use, (Sousa, 2006).

The instructional model used for small group intervention was content-based ESL. The program attempted to use educational approaches that were customized to the needs of the individual students. Berman's et al. (1995) study found that:

Creating classroom environments that will facilitate the acquisition of high-level language and reasoning skills by every student is a multi-dimensional project involving new pedagogical methods, curricula, and governance structures. It requires, on the one hand, a reexamination of what it meant to be educated (with an emphasis on reasoning, problem solving, and communication facility), and on the other, careful attention to how a highly heterogeneous student population actually learns, and constructing learning methods which build reasoning, problem solving, and language ability into the very context of students' lives.

Teaching Vocabulary

Research indicated that the intentional, explicit teaching of specific words and word learning strategies could both add words to students' vocabularies and reading comprehension could be improved, (Beck, 2002; Snow, 2000). Direct intentional teaching of vocabulary was defined as specifically choosing academic words that were considered useful to the students and likely to be found in other academic settings. The study was conceived through an expressed concern by the elementary school's classroom teachers, ELL specialist, and the administration

about the low test scores on the vocabulary and comprehension subtests for the GMRT-4 assessment.

The GMRT-4 vocabulary test measured a student's knowledge of words. The student's task was to read the vocabulary word, "in a brief context followed by five other words" (MacGinitie, 2002). The student's chose a word or phrase that most closely matched the test word. The authors of the GMRT-4 assessment stated that, "the test was a measure of word knowledge, not the ability to derive meaning from context", (MacGinitie, 2002). Struggling readers who had a low vocabulary did not perform well any assessment when the words were out of context.

Nagy and Scott (2000) identified several dimensions that described the complexity of what it means to know a word both in written and oral communications. According to Nagy and Scott (2000) knowing a word was a process of incremental stages that provided the learner an understanding of the multidimensional meaning. The multidimensional meaning of words depended on the function of the word in different forms of communication. Learners needed to see words many times and in multiple contexts to really understand the depth of a words meaning. Knowing a word was also understanding that words are interrelated so that knowledge of one word connects the learner to knowledge of another word (Nagy & Scott, 2000).

Teaching independent word learning strategies guided students in how to determine the meaning of unknown words. The researchers Carlo, August, Mclaughlin, Snow, Kressler, Lippman, and White (2004) and at the National Institute of Child Health and Human Development (2000) determined best practices to include using context clues, morphological information, and cognate knowledge, as well as using aids such as dictionaries and glossaries, (Carlo, August, Mclaughlin, Snow, Kressler, Lippman, and White, 2004; National Institute of Child Health and Human Development, 2000).

In an influential study, Baumann, Edwards, Font, Tereshinski, Kame'eui, and Olejnik reported that morphology was an important strategy for learning new words. In morphology, students use prefixes, suffixes, and roots words, to derive meanings of unknown words. The ability to use word parts to interpret new words can contribute greatly to vocabulary growth for students. The word morphology was broken down into two meaningful parts: morph- meaning shape and ology- meaning the study of. In reading instruction, morphology referred to the study of words and their structures (Baumann et al., 2002).

According to Baumann, et al., there were two types of morphology that contributed to independent word learning. The first one was the learning of word elements based principally upon ancient Greek and Latin root words. Research in the field of vocabulary has shown that, in general, learning the meanings of word parts, and how to apply them to derive the meaning of new words had the “power

to expand reading vocabulary significantly” (*p.* 150). The second type of morphological analysis is the recognition of derived word families, such as human, humanity, and humanitarian. If students understand that these words were related, and were often simply different parts of speech applied to the same root, they had a powerful tool at their disposal for learning new words (Baumann et al. 2002).

Although research has been done on the value of teaching morphological strategies to improve vocabulary growth, Baumann states that “intervention research on teaching students to use generalizable linguistic cues such as morphemic elements and context was limited and sometimes equivocal”, (Baumann et al., 2002). For language learners who had a limited vocabulary, the sheer number of words and the complexity of deeply knowing the meaning of words argued that context clues and morphological awareness alone were not enough to improve the achievement gap.

The small group intervention was a means to create a context in which specific vocabulary words were studied, to develop new word learning strategies, and also to socially construct meaning in an environment that was authentic in the use of language. As stated by Atkinson ((2002) “People use language to act in and on their social worlds: to convey, construct, and perform, among other things, ideas, feelings, actions, and identities. . . (Atkinson, 2002, p. 526). The act of learning new words was critical for the participants to convey their ideas to

others, to understand different opinions of their peers, and to build a repertoire of increasingly complex vocabulary to use language for real purposes.

Small Group Intervention and Assessment

Data driven instruction had become a vital part of teaching. On the one hand data was used to guide instruction and on the other hand, data was used to gauge student performance levels in academics. In the realm of educational terms, data used to guide instruction was deemed formative assessment and data used to gauge student performance was deemed summative assessment.

Numerous researchers have studied the outcomes of student assessment scores on vocabulary knowledge and reading comprehension. Pearson, Hiebert, & Kamil ascertained that, “in study after study vocabulary knowledge predicts comprehension performance consistently with positive correlations But correlation was not an explanation of a . . . causal relation between vocabulary instruction or learning and comprehension”, (Pearson et al., 2007, p. 283).

According to Pearson et al., the National Institute of Child Health and Human Development found only two reports which showed “that vocabulary instruction transferred beyond test-specific increases in vocabulary to far transfer measures, such as norm referenced tests”, (Pearson et al. p. 283).

Test specific assessment was criterion referenced and measured the outcomes of student knowledge about vocabulary as it related to a specific text and subsequent comprehension of the reading. The words meanings and

comprehension were in the context of one book or article, but not a broader ability to apply new learnings in different contexts. Gay, Mills, and Airason describe criterion referenced as scoring “an individual’s performance on an assessment compared to a predetermined, external standard rather than to the performance of others” (Gay, Mills, and Airason, 2009, p. 149). In this study, test specific assessment was not assumed to measure student performance of vocabulary knowledge in multiple contexts.

Norm referenced test assessments compared students scores against their peers. The Gates MacGinitie assessment is one such instrument and was used to determine grade level understandings of vocabulary and reading comprehension for the fifth grade participants of this study. According to MacGinitie, W., MacGinitie, R., Maria, and Dreyer, the grade level score was “based on the achievement of students as they progress through the grades of the public, private, and parochial schools”, (MacGinitie, 2000, p. 52). Norm referenced assessments according to Gay, Mills, and Airason were “also called grading on the curve where the curve is a bell-shaped distribution of the percentages of students who receive each grade”, (Gay, Mills, and Airason, 2009, p. 149). This meant that participants in this study were judged against other fifth grade students across the United States who took the GMRT-4 assessment.

Criterion referenced assessments measured specific local learning and norm referenced assessments measured a broad distribution of scores. The gap

was a more global assessment pedagogy that measured student understandings in a variety of assessments to include multiple modalities and multiple contexts.

Assessment of daily student progress was part of what constituted best practices and provided more flexibility in addressing the individual needs of each student.

There was a growing body of research about how students transfer their learnings from the context of instruction to the context of assessment. Baumann, Edwards, Boland, Olejnik, and Kame'enui (2003) cited Graves (2000) which recommended:

A four-dimensional, middle grade vocabulary program that includes (a) wide reading, (b) teaching individual words, (c) teaching strategies for learning words independently, and (d) fostering word consciousness. Other vocabulary researchers and writers (Baumann et al., 2003; Beck et al., 2002; Blachowicz & Fisher, 2000, 2002; Johnson, 2001; Nagy, 1998; Stahl, 1999) generally concur with Graves that a vocabulary program should be multifaceted, substantive, robust, and efficient. Determining which of the four components requires instructional attention at which point in time, for which children, under what instructional and assessment conditions, by which teachers, and at what level of performance, was indeed a trick (Baumann et al., (2003, p. 451).

In addition, teaching ESL added to the complexity of instruction and assessment of vocabulary knowledge and reading comprehension for this study. To address the needs of English language learner the intervention program included the four domains of language acquisition. The Office of the Superintendent of Public Instruction for the State of Washington (OSPI) determined that the four domains of language acquisition to be speaking, listening, reading, and writing. The state also charges the schools to include the language proficiency levels of students for instruction and assessment. For the State of Washington this was broken up into five levels of proficiency: advanced beginning, beginning, intermediate, advanced, and transitional (Language proficiency levels, 2009). Each proficiency level had a set of standards based on the grade level of the student. The mission statement of OSPI was, “English Language learners will meet state standards and develop English language proficiency in an environment where language and cultural assets are recognized as valuable resources to learning” .

The instruction and assessment of English language learners was complex and challenging task to make informed decisions about how to best educate ELL students. For students who were linguistically and culturally diverse the reliability, validity, and fairness of assessment provided a more equitable access to their education.

Summary

The research was organized to provide an introduction of the importance of a program that was intentional and targeted for language acquisition. The next section was focused on vocabulary and reading comprehension both for instruction and for student learning. The section about small group intervention explained some best practices of using small groups for vocabulary and reading instruction. The final section spoke to the assessment of language learners.

Much has been written about differentiated instruction which met the needs of individual students. Outcomes of studies on the acquisition of language showed greater growths in vocabulary knowledge and reading comprehension when students co-constructed meanings. Research had also shown that instruction should be rigorous and provide comprehensible input that was just slightly above the student's abilities.

Much of the research determined that increased vocabulary understanding allowed for greater reading comprehension. It has also been found that teaching children the structure of language provided skills that enabled students to be independent in learning new words. The motivation to read was a result of improved reading skills and student's ability to read more complicated texts.

There seemed to be a consensus among the researchers that small group intervention was a means to provide a more intimate learning environment. Recommended programs included the four domains of ESL: speaking, listening,

reading, and writing. Curriculum tied to real life topics provided a forum to use new vocabulary. According to the research, students who discussed important topics in an academic setting were more likely to perform better on assessment.

There is more research needed on the assessment of English language learners. Current research suggests that multiple measures provided the best data on the student academic progress. Students who were learning a second language needed alternative methods to demonstrate understanding of concepts that were not dependent on their English language ability.

CHAPTER 3

Methodology and Treatment of Data

Introduction

The level to which a student was able to comprehend academic text and use academic vocabulary had been associated with the gaps in reading performance between English only speaking students then for English language learners. The problem addressed in this study looked at the achievement gap for ELL students on vocabulary and reading comprehension assessments. The study was exploratory in nature to determine whether Hispanic ELL students were able to perform better on the GMRT-4 because of the intervention. The study was a one group pretest-posttest pre-experimental design which utilized small group intervention. The instrument for data gathering was the GMRT-4 and statistically analyzed with Statpak (Gay, Mills,& Airson, 2000) through a t-test for non-independent samples.

Methodology

This was a pre-experimental one-group pretest - posttest study designed to determine whether small group vocabulary and reading comprehension instruction produced greater growth for ELL students on the school district assessment. A group of students in the fifth grade were selected to participate in a small group intervention. Scores from the fall GMRT-4 and spring GMRT-4 assessment has

been statistically analyzed with software from Statpak (Gay, Mills, & Airason, 2000) using a non-independent t-test to measure growth in the student scores.

Participants

The study was conducted in a public elementary school that had fifty three percent of students who qualified for free or reduced priced meals and twenty percent of students enrolled in the Washington state Transitional Bilingual program in, (Washington State report card, 2008-09). The beginning of the 2009-2010 school year registered one hundred twenty active ELL students in a population of four hundred thirty five students at the elementary school. The increase of ELL population rose to twenty eight percent and the population of fifth grade went from ten active ELL students in 2008 - 2009 to twenty six active ELL students in 2009 - 2010. The first languages of the twenty six ELL students in the elementary school consisted of two Russian, two Korean, 1 Sudanese, two Marshellese, one Portuguese, and eighteen Spanish language learners. There was a significant increase in the ESL program from previous years especially in Spanish speaking students.

The Office of Superintendent of Public Instruction reported the student demographics in the 2003- 2004 (Washington State report card, 2003-2004) school year to include twelve percent active ELL students in the state bilingual program in which nineteen percent were of Hispanic descent. The growth in the ESL program at the elementary school was anticipated to remain steady at

approximately three percent increase in ELL population for the coming years primarily of Spanish speaking students.

This district and the elementary school was in a transitional phase of implementing current research that supports best practices for instruction of language learner students. The ESL program had historically been a pull-out program that was separated from the general education program with little collaboration between the general education and the ESL programs. Starting in 2007, the district and by proxy the elementary school, began changing the ESL philosophy to be more inclusive and two way conversations took place between the general education teachers and the ESL program. In 2009 the elementary school began a system of progress monitoring through data gathered by both the general education program and the ESL program.

All eighteen Spanish speaking ELL students in the fifth grade participated in the study and were tested at an advanced level during the school year 2008-2009 on the annual Washington state WLPTII test for language proficiency. There were two fifth grade classrooms at the elementary school with nine active advanced language proficiency ELL students in each class. The classroom teachers were highly qualified to teach fifth grade. The two fifth grade classroom teachers were not endorsed by the state of Washington in ESL instruction. The three instructors who administered the treatment intervention were highly qualified. The ESL instructor was a certified teacher with an ELL endorsement.

The two paraeducators were directed by the ESL teacher and had four or more years experience working with language learners.

The purposive sampling for this study consisted of eighteen students from the fifth grades. The fifth grade students were selected to participate in an eighteen week intervention program. The fifth grade Hispanic population were all at least one grade level below fifth grade reading standards according to the school district assessments and state reading standards according to OSPI. The treatment group consisted of nine boys and nine girls between the ages of ten and eleven years. The students who participated in the study spoke Spanish as their first language and had attended elementary school in the United States since the first grade.

Instrument

The instrument used in this study to gather data for measuring vocabulary knowledge and reading comprehension was the fourth edition of the Gates MacGintie reading test form S. According to the authors of the GMRT-4;

The test had a separate subtest for vocabulary and reading comprehension. Each subset provided a raw score (RS), a percentile rank (PR), a normal curve equivalent (NCE), and a grade equivalent (GE). A raw score indicates the number of current answers. The percentile rank indicates where a raw score fits within the range of scores obtained by the national norming group. The normal curve equivalent was a statistical

(normalized) transformation of percentile ranks in which the range of reading achievement is divided into ninety-nine equal units with a mean of 50 and a standard deviation of 21.06. The grade equivalent was an estimate of the grade level for which the raw score would have been the median score (MacGinitie, 2002).

Design

This study was a pre-experimental research using a one-group pretest-posttest control group design. The intact groups of fifth grade elementary ELL were all selected to participate in the intervention. The treatment was delivered in three groups of six students by the ELL educators. The GMRT-4 assessment was administered in September of 2010 as a pre-test and again in May of 2010 in the general education classroom by the classroom teacher. A t-test for non-independent samples was analyzed using Statpak (Gay, Mills & Airason, 2000).

Gay et al. (2009) outlined the internal and external threats to validity for a pre-experimental design study. The researcher recognized the internal threat of history because comprehension and vocabulary instruction in the general education classroom could have affected the intervention outcome. Maturation was another internal threat but was minimized due to the short time span of the intervention. The length of time between the GMRT-4 pretest and the GMRT-4 posttest was less likely to impact the assessment results. The internal threat of instrumentation was controlled through the use of the GMRT-4 which was used a

both the pretest and the posttest and was recognized as a valid and consistent assessment. The researcher controlled statistical regression by selecting participants who were similar in their GMRT-4 scores and their language proficiency. All students in the treatment groups were at an advanced level of language proficiency which helped to mitigate regression. The researcher also recognized that selection-treatment interaction was an external threat and the results of this study may not be representative to ELL populations in other learning environments. Pretest-treatment interaction was minimal because the time between pretest and posttest was lengthy enough to diminish the impact on the test results (Gay, Mills, & Airason, 2009).

Procedure

The intervention consisted of eighteen weeks of instruction from January 2010 through May of the 2010 school year. Every third week a new topic was discussed through a series of lessons that aimed at answering essential questions. Two weeks was spent on an essential question with the third week preparing for and engaging in a debate. Each topic was chosen from a program offered through a collaborative effort between Strategic Education Research and Boston Public Schools (Donovan, 2008) called Word Generation. The topics were connected to real world events and chosen for the potential interest of fifth through twelfth grade students. An example of a Word Generation article can be seen in Appendix B. Other resources, such as newspaper, magazines, the internet, and

other relevant texts were utilized to enhance and deepen understanding around the topic. The curriculum was also aligned with the Washington State grade level equivalencies (GLE) and the English language development (ELD) standards.

During each two week time frame, ten new vocabulary words were selected from the readings for direct instruction. The intervention was delivered for thirty minutes five days per week. Monday through Thursday focused on the readings for comprehension and formulating student definitions of the target words. Fridays were devoted to review of target words and activities to promote recommended strategies by Beck et al. (2002) to develop word analysis capabilities. The strategies included word association tasks, semantic features, synonym/antonym tasks, derivational morphology, root words, and cognates. The Friday activities to develop word solving strategies varied depending on the needs of the students. All of the activities were scored with a check plus, a check, or a check minus with written teacher feedback. The feedback was given the following school day. Presentations and participation in the debate were rated on a scale of one to four with one being the lowest score.

The eighteen students were divided into three groups who met with either the ELL specialist or one of the paraeducators at a specific time each day as coordinated with the classroom teacher. The ELL educators for each small group were highly trained in effective strategies for language learning. The educators included a certified teacher with an ELL endorsement and two paraeducators.

The certified teacher was responsible for development, training, and overseeing of the paraeducators fidelity of implementation of the intervention curriculum.

The three week cycle began on Monday with presenting a topic and essential question. A brief five minute introduction was given by the educator who used visual aids as appropriate. A blank bulletin board poster size visual organizer was displayed and continually added to during each three week cycle by the students and the teacher. The students kept two notebooks, one for note taking and the other specifically for vocabulary. After a brief discussion, any student questions were added to the visual organizer poster. The students were divided into groups of two and given ten minutes to formulate a prediction about the topic, write their prediction on a sentence strips and display the sentence strips in a pocket chart. Each group of two students were asked to read their prediction to the remaining students and encouraged to discuss their thinking process. To end the session each student created an organizer in their notebooks. The advance organizer was a chart which had three columns, one for writing what was already known, the second for what was wanting to be known, and the third for what was learned. The advance organizer chart was referred and added to throughout the three week cycle.

The lesson for Tuesday began with a review of the student predictions and a teacher read aloud of the text. The text consisted of a brief article from the Word Generation curriculum. The reading of the text was chunked by paragraphs

followed by a brief discussion and co-creating a summary of what was written onto chart paper. The completed summary was added to the visual organizer bulletin board. The target words were presented and during a whole group second read of the article, the students highlighted the target words in the text. The students added the target words to their vocabulary notebooks and worked in teams of two to infer word meanings from the context of the text.

Wednesday lessons utilized the Word Chart graphic organizer from the Word Generation curriculum as seen in Appendix B, to discuss the meanings of the target words, write different forms of the words, provide an example of the word, and take notes or draw picture representation of the words. The students then worked in groups of two and completed two activities using the target words. One activity was composed of sentences that related to the topic with blank spaces for the student to write in the correct vocabulary word. The second activity was designed to set the target word in another content area.

The lesson on Thursday presented another article from Word Generation which used the same target words of that week in a different content area. The teacher performed a shared reading of the article with guided discussion about related meanings of the target words. The objective was to help the students understand that many words were polysemous. With guidance from the teacher, the students recorded notes about the target words in their vocabulary notebooks. The students worked in teams to complete a poster size Frayer model. The teams

began development of a presentation of their poster to the group on Friday. The teams were given presentation guidelines to follow and a rubric of expectations.

Friday lessons started with team presentation of the Frayer model to the rest of the group. The teams scored each other's presentations based on the rubric. The remaining time was devoted to activities designed to promote word research recommended strategies as in Beck et al. (2002) for decoding unfamiliar words and gaining word meaning.

Monday through Wednesday of the second week, a review of the articles and target words were discussed and notes were recorded by the students. The review included development of an opinion about the essential question. Four positions about the essential question were taken from the Word Generation curriculum as seen in Appendix D. Each student chose a position to support. Three debate teams were formed from the three intervention groups based on one of the four positions about the essential questions. Thursday was devoted to the debate teams arguing their positions. The scoring of each debate team was performed by the students and the ELL educators based on a rubric. Friday was devoted discussion about the debate and word analysis activities.

Monday of the third week in the three week cycle began with guided instruction about essay writing and students preparing a draft essay. Tuesday and Wednesday revised and finalized their essays about the topic for each three week

cycle. Thursday was a review for a Friday assessment of the text and vocabulary words. Friday a multiple choice test was administered.

During the eighteen week intervention there were six essential questions and topics drawn from the Word Generation curriculum. The implementation of the treatment was delivered with fidelity by the three ELL educators as previously described.

The treatment groups were administered the Gates MacGinitie-4 form S assessment in September and again in June 2010. The raw scores from the September 2010 assessment were used as the pretest instrument and the raw scores from June 2010 assessment were used for the posttest instruments for this study.

Treatment of Data

The data were calculated with Statpak (Gay, Mills & Airason, 2000) through the use of a non-independent t-test to compare the means of the fall GMRT-4 scores to the spring GMRT-4 scores. The significance was compared from the Fall GMRT-4 and the Spring GMRT-4 assessments.

Summary

The research for this project was conducted through small group reading comprehension and vocabulary instruction that attempted to determine if ELL students performed with higher scores on the GMRT-4 assessment than if ELL students had not received small group instruction. The methodology used a pre-

experimental design to determine whether the impact on student achievement was significant enough to warrant further study. The participants were eighteen fifth grade students attending a diverse elementary school in the state of Washington. The participants were placed into three groups of six students each and instructed by highly qualified educators. The instrument used to gather data was the GMRT-4 assessment which scored the student's skill in reading comprehension and knowledge of academic vocabulary. The pre-experimental design looked at the GMRT-4 scores from the fall of 2010 as the pre-test and at the spring scores as the posttest. Internal and external reliability weaknesses were controlled for as thoroughly as possible. The strength of the study lay in the research which indicated that English language learner students had not advanced quickly enough in reading skills to catch up to English only speaking students. Intensive small group instruction was one means of reducing the achievement gap. The procedure of the intervention was to increase the skills base for the participants in reading comprehension and decoding of academic vocabulary. The text used in the study was of high interest to the participants and dealt with real life essential questions which required the students to form an opinion and debate their position on the essential question. The reading and word learning had a real context and provided motivation for the students to learn.

CHAPTER 4

Analysis of the Data

Introduction

The research concern that motivated this study was to address the academic achievement gap in vocabulary knowledge and reading comprehension amongst Hispanic ELL students enrolled at the elementary school where the study took place. Students who were learning English as a second language had a limited understanding of academic vocabulary. According to Stahl (1999), “knowing a word means not only knowing its literal definition but also knowing its relationship to other words, its connotations in different contexts, and its power of transformation into various other forms” (Stahl, 1999). The intervention for this study was a means to determine if intensive vocabulary instruction would provide a depth of word knowledge that would impact test results of the participant on the GMRT-4 assessments .

Description of the Environment

The study was implemented in an elementary school where the increase in language learners was increasing and concerns were raised about the student’s ability to meet standards on high stakes tests. To address these concerns, the intervention focused on vocabulary and reading comprehension instruction in small groups of six students to one instructor. The intervention included lessons both in the general education classroom and in a separate ESL classroom

depending on the nature of the lesson. The lesson lasted for thirty minutes, five days per week. The length of the study ran for eighteen weeks beginning in January of 2010 and ending in May of 2010. The participants were eighteen Hispanic ELL students who were tested at an advanced level for knowledge of the English language using the 2008/2009 Washington state WLPTII assessment. There were three intact groups of six students each taught by a highly qualified instructor. The materials used for the intervention were pulled from a curriculum developed by a partnership of Boston Public Schools and Strategic Education Research Partnership called Word Generation. The curriculum was comprised of high interest articles that identified five academic vocabulary words. The vocabulary words were taught through content areas of social studies, math, and science. The intervention included work with multiple meanings of words and derivational morphology. The intervention culminated in a debate to argue different positions about a specific topic among the three intervention groups.

Hypothesis

English language learner students who received ESL small group intervention scored higher on GMRT-4 test than English language learner students who did not receive small group ESL intervention. The scores from the GRMT4 assessments were used to fifth grade level word knowledge and comprehension of grade level text according to the developers of the GMRT-4 assessment.

Null Hypothesis

There was be no significant difference on GMRT-4 assessments for English language learner students who receive small group ESL intervention than for English language learning students who did not receive small group ESL intervention. The significance was determined using threshold levels of $p \geq .05$, .01, and .001.

Results of the Study

The results of the study provided data to address the hypothesis of the research. The pre-experimental treatment group completed the Fall and Spring 2010 Gates MacGinitie summative assessment. The Gates MacGinitie (MacGinitie, 2002) test results were analyzed using the Statpak (Gay, Mills, & Airasain, 2009) producing statistics and associated values. Based on the analysis, the pre-experimental group did demonstrate a higher achievement on the Gates MacGinitie test because of the intervention.

Table 1.

Gates MacGinitie Pretest and Posttest Data

Student	Preretest Data Fall 2010	Posttest Data Spring 2010
1	24	44
2	15	21
3	22	33
4	39	45
5	32	37
6	48	53
7	36	34
8	30	37
9	34	51
10	39	43
11	36	48
12	43	53
13	32	43
14	23	35
15	24	23
16	26	21
17	41	43
18	33	42

A t – test for non-independent samples score of 4.75 was determined in the statistical analysis (Gay, Mills, & Airasian, 2005). Statpak software (Gay, Mills, & Airasian, 2000) was used to calculate the test scores on the GMRT-4 for fall and spring 2010. The mean of the pre-experimental group’s GMRT4 tests determined the value of t. The mean was 7.17 and the degrees of freedom were 17. The evidence suggested the vocabulary intervention had a significant impact of student learning in the GMRT4 assessment.

Table 2

Statpak Analysis

Statistic	Value
No. of Paired Scores	18
Sum of Paired Scores	129.00
Mean of Paired Scores	7.17
Sum of Paired Scores Squared	1621.00
t-Value	4.75
Degrees of Freedom	17

$$t = \frac{\frac{\sum D}{n} - \bar{D}}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{n}}{n-1}}}$$

$$t = \frac{\frac{129}{18} - 7.17}{\sqrt{\frac{1621 - \frac{(129)^2}{18}}{17}}}$$

$$t = \frac{18(1621) - (129)^2}{17}$$

t = 4.75

Significance was determined for $p \geq .05$, $.01$, and $.001$ (Gay, Mills, & Airasian, 2005). The calculated value of t , which was 4.75 , was larger than the threshold value for t at $.05$, $.01$, and at $.001$. The null hypothesis was rejected at $p \geq .05$, $.01$, and $.001$, thus supporting the hypothesis according to the probability Table A.4, Distribution of t (Gay, Mills & Airasian, 2005, p.563). There was a significant difference between the fall GMRT-4 pretest and the spring GMRT-4 posttest.

Table 3.

Distribution of t

<i>df</i>	<i>p</i>		
	.05	.01	.001
17	2.11	2.89	3.96

Findings

Students who received small group ELL intervention realized higher achievement on the Gates MacGinitie fourth edition assessment than if they did not received the intervention. The Statpak analysis calculated t score of non-independent samples at 4.75 (Gay, Mills, & Airasian, 2005).

Significance was determined for $p \geq .05$, $.01$, and $.001$ (Gay, Mills, & Airasian, 2005). The calculated value of t , which was 4.75, was larger than the threshold value at $.05$, $.01$, and $.001$. The null hypothesis, that there was no significant difference between the fall and spring GMRT-4 assessment for students who received small group ELL instruction was rejected at $p .05$, $.01$, and $.001$ (Gay, Mills, & Airasian, 2005). The hypothesis, that there was significant difference was accepted at intervals of $.05$, $.01$, and $.001$.

Discussion

The researcher recognized that there were aspects of the study which may have negatively affected the results. According to Gay, Mills & Airasain there were limitations and interpretation to be considered when conducting a study. Studies cannot answer all questions, cannot capture all information about the participants and the environment, and measuring instruments always have some degree of error, (Gay, Mills, & Airasain, 2009, pp. 5).

The results suggest that small group intervention that focuses on language acquisition in written and oral communication was consistent with expectation discussed in other studies of like kind. As noted by Nagy, et al., 2000; language was communication and vocabulary was critical to effective communication.

Nagy & Scott as cited by Lesaux et al. stated that:

Vocabulary knowledge was likewise multidimensional and complex in nature; knowing a word well requires a combination of different types of knowledge: its definition, its relationship to other words, its connotations in different contexts (i.e. polysemy), and its transformation into other morphological forms was a complex and multi-dimensional cognitive process. Knowing a word requires a combination of different types of knowledge and skills. (Lesaux, Kieffer, & Kelley, 2010, pp. 197).

The study was expected to yield important information about word knowledge and its associated reading comprehension. The purpose of the study was to determine the need for further research. The interpreted data indicates that there was significance for English language learners to improve test scores on the GMRT-4 assessments.

Summary

The small group intervention was developed with an understanding of best practices for the instruction of English language learners whose first language was Spanish. The pre-experimental research using a one-group pretest-posttest control group design pre-test attempted to determine if intentional vocabulary instruction positively impacted student scores on the GMRT-4 assessment.

The findings discovered in the study pointed to the necessity of providing an intervention program that was differentiated both in instruction and assessment to meet the needs of individual learners. For students who were learning a second language, multiple measures ensured that instruction was rigorous and still comprehensible to the student. The assessment of the participants multi-faceted and was a means for the educator and the student to know what were the next steps for instruction.

The outcome of the hypothesis showed significance at levels, .05, .01, and .001 according to Statpak software analysis, (Gay, Mills, & Airason, 2000). The null hypothesis was rejected at the same levels.

CHAPTER 5

Summary, Conclusions and Recommendations

Introduction

The purpose of the research project was to gather enough reliable information to determine whether the instructional techniques applied led to an increase in vocabulary knowledge and reading comprehension. The participants had historically performed below grade level expectations on district level vocabulary and reading comprehension assessments. The Gates MacGinitie, fourth edition was given at the elementary school on a quarterly basis. By fifth grade, the January assessment was part of the data reviewed to promote students to middle school. The GMRT-4 assessment was a critical element in a student's perception of themselves as learners and their belief that they could achieve academic success.

The participants were eighteen English language learners whose first language was Spanish. The classroom teachers and the ELL specialist determined that a limited vocabulary was the primary reason that the students did not have access to grade level academic readings.

The sheer number of words that allowed access to text made it difficult to determine which words to teach. The project presented here focused on teaching students the structure of the English language and skills to develop independent strategies to decode new words encountered in fifth grade level readings.

Summary

The project was a pre-experimental design with a pretest, an intervention, and a posttest. The intervention team collaborated with teachers on skills being taught in the general education classroom. The collaboration was to ensure that the participants were getting a second dose of similar instruction and additional opportunities to practice the skills. The intervention team also worked with classroom teachers to determine topics that were of similar nature and of interest to the students. The intervention program placed the topics in a real life context by setting up debates among the participants. The students were to choose a position about the topic and be able to discuss their thinking processes which led to their opinion.

By the fifth grade, there was little to no teaching of the structure of the English language. Students were taught vocabulary words, but needed more advanced skills in decoding unfamiliar words independently. The teaching of derivational morphology included the instruction of root words, suffixes, and prefixes which informed students on how the meanings of words can shift. Included in the intervention was instruction on words that had multiple meanings depending on the context of the vocabulary word. The vocabulary was intentionally selected and meanings were co-constructed by the participants and the educators during small group intervention sessions. During the thirty minute intervention session there was vocabulary, reading, and writing activities.

Conclusions

The literature and research had a unified front about best practices in teaching vocabulary knowledge to ELL students. The authors were consistent in their conjectures that increased in vocabulary knowledge led to an increase in reading comprehension of progressively harder text.

The complexity of teaching a new language and teaching children to read had been studied seriously since the early 1970's. Today, it was hard to find literature on language arts without the ELL component. It has been recognized that the achievement gap for English language learners has been in large part a lacking in the system of American schools. The pendulum was swinging to recognize how background and culture of the learner had an affect on student achievement.

The study presented here was a first step in understanding how best to instruct second language learners. The desired results of a program for Spanish speaking fifth grade students were realized. According to the analysis of data retrieved from the fall pretest to the spring posttest there was an increase in assessment scores. Significance of the hypothesis was determined using a t-test. The distribution of t was analyzed at the thresholds of .05, .01, and .001 (Gay , Mills, & Airason, 2005). The null hypothesis was rejected at $p \geq .05$, .01, and .001.

Recommendations

The public school system in America is facing an urgent task of providing rigorous teaching and equitable assessment of English language learners. The increase of immigrant children and the diversity of the immigrant necessitates the need for all teachers to understand language acquisition. More research needs to be done, but more importantly, the knowledge gained from research about language acquisition must be more rigorously taught to teachers. This places a huge burden on the school districts to develop professional development that is continuous.

It will be recommended to the principal at the elementary school to continue the small group intervention program into the next school year. The fifth grade students gained more than vocabulary and an increase in reading comprehension. They also gained a positive image and an awareness of how much they were capable of. The self-efficacy of the students was evident from their engagement during the eighteen weeks as well as from their increased scores on assessments.

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